C l a i m s

1. Method for determining a correlation phase between a signal received at a receiver and an available replica sequence by using a matched filter checking various correlation phases, said matched filter multiplying samples (21) of said received signal with samples (22) of said replica sequence and summing the resulting products to obtain a correlation value for a specific correlation phase, which samples (21) of said received signal and which samples (22) of said available replica sequence are shifted relative to each other for each correlation phase which is to be checked, wherein results obtained in the calculations for one correlation phase are used by said matched filter for calculations for a subsequent correlation phase.

2. Method according to claim 1, wherein said matched filter multiplies said samples (21) of said received signal elementwise with samples (22) of said replica sequence.

3. Method according to claim 1, wherein said received signal comprises a binary sequence.

4. Method according to claim 3, wherein possible values of said binary sequence are +1 and -1.

5. Method according to claim 4, wherein C_i constitutes a determined correlation value for an i^{th} checked correlation phase, wherein N is a length of said binary sequence, wherein x_{j+i} constitutes a j^{th} sample of said received signal for said i^{th} correlation

phase, wherein the samples (22) of said replica sequence are not shifted for different correlation phases which are to be checked, wherein r_j constitutes a j^{th} sample of said replica sequence, wherein a set J_+ comprises the indices j for which $(r_j = 1 \;\&\; r_{j-1} = 1)\ OR\ (r_j = -1 \;\&\; r_{j-1} = -1)$, and wherein a correlation value C_{i+1} for the $(i+1)^{th}$ correlation phase is calculated as:

$$C_{i+1} = -C_i - r_0 x_i + r_{N-1} x_{i+N} + \sum_{j \in J_+} 2 * r_j x_{j+i} .$$

6. Method according to claim 4, wherein C_i constitutes the determined correlation value for an i^{th} checked correlation phase i, wherein N is the length of said binary sequence, wherein x_{j+i} constitutes a j^{th} sample of said received signal for said i^{th} correlation phase, wherein the samples (22) of said replica sequence are not shifted for the different correlation phases which are to be checked, wherein r_j constitutes a j^{th} samples of a said replica sequence, wherein a set J_- comprises the indices j for which $(r_j = 1 \;\&\; r_{j-1} = -1)\ OR\ (r_j = -1 \;\&\; r_{j-1} = 1)$, and wherein a correlation value C_{i+1} for the $(i+1)^{th}$ correlation phase is calculated as:

$$C_{i+1} = C_i - r_0 x_i + r_{N-1} x_{i+N} - \sum_{j \in J_-} 2 * r_j x_{j+i} .$$

7. Method according to claim 4, wherein C_i constitutes a determined correlation value for an i^{th} checked correlation phase, wherein N is the length of said binary sequence, wherein x_{j+i} constitutes a j^{th} sample of said received signal for said i^{th} correlation phase, wherein the samples (22) of said replica

sequence are not shifted for the different correlation phases which are to be checked, wherein r_j constitutes a j^{th} sample of said replica sequence, wherein a set J_+ comprises the indices j for which $(r_j = 1 \;\&\; r_{j-1} = 1)\ OR\ (r_j = -1 \;\&\; r_{j-1} = -1)$, wherein a set J_- comprises the indices j for which $(r_j = 1 \;\&\; r_{j-1} = -1)\ OR\ (r_j = -1 \;\&\; r_{j-1} = 1)$, and wherein a correlation value C_{i+1} for the $(i+1)^{th}$ correlation phase is calculated as:

$$C_{i+1} = -C_i - r_0 x_i + r_{N-1} x_{i+N} + \sum_{j \in J_+} 2 * r_j x_{j+i} ,$$

if the size of said set J_- is larger than the size of said set J_+, and as:

$$C_{i+1} = C_i - r_0 x_i + r_{N-1} x_{i+N} - \sum_{j \in J_-} 2 * r_j x_{j+i} ,$$

if the size of said set J_+ is larger than the size of said set J_-.

8. Method according to claim 1, further comprising a subsequent coherent and/or noncoherent processing for handling signals of low strength.

9. Method according to claim 1, wherein said received signal is a code modulated signal, and wherein said replica sequence is a replica code sequence.

10. Method according to claim 9, wherein said code modulation of said received code modulated signal is a Code Division Multiple Access (CDMA) spread spectrum modulation.

11. Use of a method according to claim 1 in a process for acquisition and/or tracking of signals received at a receiver.

12. Receiver comprising

receiving means for receiving signals; and

processing means for carrying out the method according to claim 1.

13. Receiver according to claim 12, which receiver is a receiver of a positioning system.

14. Electronic device comprising a receiver according to claim 12.

15. Electronic device according to claim 14, wherein said electronic device is a mobile terminal capable of communicating with a communication network.

16. Device comprising

means for receiving from a receiver information on signals received by said receiver; and

processing means for carrying out the method according to claim 1.

17. Device according to claim 16, which device is a network element of a network.

18. System comprising

a receiver comprising means for receiving signals, and means for providing information on received signals; and

a device according to claim 16.

19. System comprising

a receiver according to claim 12; and

a device for providing assistance data to said receiver.

20. System according to claim 19, wherein said device is a network element of a network.

21. System according to claim 19, wherein said system is a positioning system.

22. System according to claim 18, wherein said system is a positioning system.